

Advanced Hepatopancreaticobiliary cancer related Malignant Biliary Obstruction: 2013-2015
Percutaneous Transhepatic Catheter biliary diversion experience at MD Anderson Cancer Center

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BACKGROUND: Hepatopancreaticobiliary cancers (HPBC = hepatocellular, cholangiocarcinoma, pancreatic adenocarcinoma) are increasing in incidence & prevalence globally. Non operable HPBC-associated malignant biliary obstruction (MBO) is commonplace as the disease progresses. Percutaneous transhepatic cholangiography guided catheter-assisted biliary diversion (PTBD) procedures for advanced, non-operable HPBC continues to be applied despite the evolving capabilities of endoscopic retrograde cholangio-pancreaticography (ERCP) biliary decompression techniques & devices. We sought to objectively understand the contemporary clinical benefit of PTBD in this cohort at our cancer center.

HYPOTHESIS: HPBC patients with MBO benefit from PTBD at our cancer center.

METHODS: Over a 28 month period 99 HPBC patients (59M, 40F median age 62 yrs) with MBO underwent PTBD for a myriad of clinical indications, principal of which was to normalize serum bilirubin levels (<2mg/dl) to enable hepatic metabolism of HPBC sensitive systemic oncotherapy. We sought to assess the morbidity, mortality, and clinical benefit of PTBD in patients with HPBC at our cancer center.

RESULTS: 134 PTBD catheters (range 1-4/patient) were inserted & required 294 exchanges during the course of care. 21 patients had prior surgical bilio-enteric anastomoses. 25 patients had trans-ERCP inserted devices (metal or plastic biliary endoprosthesis) out of 62 patient ERCP attempts.

No peri-PTBD procedure related mortality occurred. Pre-PTBD median serum bilirubin level was 7.9mg/dl; decreasing serum bilirubin levels were noted in 83 (84%) patients with normalization in 59 (60%); of these latter patients, 19 (32%) received systemic oncotherapy. In the remainder 40 (68%) patients, co-morbidities precluded systemic oncotherapy. 68 (69%) patients required at least one PTBD catheter exchange for catheter related dysfunction; 47 (48%) patients developed one or more instance of peri-catheter external biliary leak. 30 (30%) patients required hospital admission to address PTBD-related dysfunction. 10 patients underwent conversion to functional internal metal biliary endoprostheses for enteric bile diversion that allowed PTBD removal. Median survival post PTBD was 74 ds.

CONCLUSION: PTBD remains an effective method to decrease serum bilirubin levels in the era of advanced ERCP techniques. PTBD catheter-related dysfunction often lead to increased morbidity & resource utilization. In isolation, serum bilirubin level normalization post-PTBD did not reliably portend the ability to receive systemic oncotherapy.